STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
DIVISION OF SITE REMEDIATION
291 Promenade Street
Providence, R.I. 02908-5767

September 14, 1994

Debra Carlson
Remedial Project Manager
U.S. Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Code 1823-Mail Stop 82
Lester, PA 199113-2090

RE: Navy Response to RIDEMs comments on:
Phase II Remedial Investigation Report,
Human Health Risk Assessment Old Fire Fighter Training Area,
Naval Education and Training Center, Newport, Rhode Island.

Dear Ms. Carlson:

Please find attached responses generated by the Division of Site Remediation concerning the above mentioned documents.

If you have any questions or require additional information concerning the comments, please contact Paul Kulpa at (401) 277-3872 ext. 7111.

Sincerely,

Richard Gottlieb, P.E.
Principal Sanitary Engineer

cc: Warren S. Angell, DEM DSR
Greg Fine, DEM DSR
Paul Kulpa, DEM DSR
Andrew Miniuks, USEPA Region I
Brad Wheeler, NETC

OLD FIRE FIGHTER TRAINING AREA
REMEDIAL INVESTIGATION Responses

14. Section 1.3.2, Site History:
Page 1-12, 2 nd Paragraph.

"Underground piping carried the water/oil mixtures to the buildings and from the buildings to the oil/water separator."

During a number of Project Manager and TRC meetings the State has indicated that information from engineering drawings, such as the underground piping network, holding tanks, specifics of the oil/water separator, etc. for the site should be included in the Phase II RI. This information and appropriate plans must be included in the report in order to adequately address potential sources of contamination at the site, such as, the oil sludge found in the clay pipes during the excavation of test pit 1.

The Navy has indicated that they are unaware of any other documentation on the prior layout or operation of the former Fire Fighter Training area. The State feels that useful information may be obtained from the archives at the NETC Engineering Command building. This information is needed in order to ascertain whether potential problems still exist at the site.

15. Section 1.3.2.1 Aerial Photographs and Maps:
Page 1-12, 3 rd Paragraph.

This section of the report discusses structures visible on aerial photographs for the site. The report should note whether stained soil is visible on these photographs.

The Navy has indicated that stained soils were not visible in the aerial photographs. The State requests that said photographs be made available for regulatory review.

19. Section 2.2.1, Seismic Refraction Results:
Page 2-3, 4th Paragraph.

"Based on the seismic refraction results, the depth to bedrock beneath the site varies between approximately 6 and 27 feet below ground surface."

The report should include a bedrock profile figure based upon the seismic survey results. This will allow a comparison between the monitoring wells results and the seismic survey results.

The Navy has indicated that the results of the borings represents true depth to bedrock. The State is aware of the limitations of seismic refraction studies. However, the State reiterates its request for these figures as it provides information to confirm the depth to bedrock.

20. Section 2.2.1, Seismic Refraction Results:
Page 2-3, 4th Paragraph.

"Based on the seismic profile, there appears to be a shallow basin present in the bedrock surface at the center of seismic line number 1 and along seismic line number 2."

The report should note whether any bedrock monitoring wells were placed in this shallow basin to investigate potential pooling of NAPL's.

The Navy stated they would provide discussion of monitoring wells down gradient of the "shallow basin" in the revised report. This discussion was not found. Please provide this information.

21. Section 2.2.2, Electromagnetic Conductivity Survey:
Page 2-5, EM-31 Survey Results.

Please note what material the storm sewer line is made of.

The Navy stated they believe the sewer line is a 12-inch steel-reinforced concrete pipe. This information should be included in the revised report.

25. Section 2.3.1, Soil Gas Methodology:
Page 2-8, 2nd Paragraph.

"These compounds were chosen to evaluate the presence of fuel product, or petroleum-based solvents."

BTEX analysis has limited utility in the investigation of heavy oil contamination. The oil sludge observed in the clay pipes and the staining observed in the vicinity of the mounds appeared to be associated with heavy oils. Therefore, the report should note the limitations of the soil gas survey and comment on the potential heavy oil contamination at the site.

The Navy stated they would provide a discussion of the limitations of a soil gas survey and the soil gas analyses conducted for this site in Section 2.3.1 of the revised RI report. The revised RI report does not contain this information, please

provide.

26. Section 2.3.1, Soil Gas Results:
Page 2-9, 2nd Paragraph.

This section of the report discusses the results of the soil gas survey.

The survey was conducted during a period of heavy precipitation. The report should note whether the precipitation had any affect on the survey, for example were saturated conditions encountered during the survey.

The Navy stated they would add the precipitation data to the revised RI report. This data was not found, please provide.

31. Section 2.6.1, Overview of investigation:
Page 2-19, 1st Paragraph.

This section of the report indicates that a test was conducted for NAPL. The report should indicate whether the test was done for both LNAPL and DNAPL. In addition, the Phase II RI is a public document. Therefore, the report should note that NAPL are materials which are found either on the bottom or floating on the top of the water column.

The Navy should add LNAPL and DNAPL to the list of acronyms provided in the document.

47. Section 4.2.2, Semivolatile Organic Compounds (SVOCs):
Page 4-19, 3 rd Paragraph.

"The groundwater from all but one of these wells, MW-11R, had a noticeable petroleum-like odor."

The report should indicate why petroleum type odors were detected in the monitoring wells, yet low levels of SVOCs and VOCs were detected. These wells should be analyzed for TPH, as this would provide useful information for an ecological risk assessment.

The Navy has indicated that although petroleum contamination is present in subsurface soils and groundwater at the site, the samples were not run for TPH as this analysis was not stipulated in the Phase II RI Work Plan and the SVOC and VOC results indicate petroleum contamination is present. The State agrees that the test results gathered to date indicate that petroleum contamination is present at the site. The State reserves the right to request TPH analysis of site samples in order to determine if remediation is required at the site.

49. Section 4.3.4, Inorganics:

Page 4-25, 2nd Paragraph.

As justification for stating that this water sample was impacted by harbor waters please provide a table which delineates the typical concentrations of the noted constituents in sea water.

The Navy stated that inorganics data for a surface water sample collected in Phase II from Narragansett Bay near one of the other NETC sites (Site 01) will be added to Table 4-15 for comparison. The State requests that this information be provided in the revised report.

58. Figures 1-7 and 2-5.

Please locate SS-7.

The Navy stated they would place a footnote on these figure indicating that sample SS-7 is in the same location as sample SS-2. This has not been referenced on Figure 2-5.

HUMAN HEALTH RISK ASSESSMENT

13. Section 4.3, Constituents for Which EPA Has Not Developed Toxicity Criteria: Page 4-8, Paragraph 2.

It is noted that EPA proposes an interim cleanup level for lead of 500 to 1,000 mg/kg. It should also be noted that the State of Rhode Island has a cleanup level for lead of 300 mg/kg. This reference and other such references throughout the document should reflect this.

Please note that the Rhode Island Department of Health has promulgated "Rules and Regulations for Lead Poisoning Prevention" [R 23-24.6-PB], February 1992 (E) which were amended in March 1994 (E) that require abatement of lead in soils with a concentration of 150 mg/kg or greater. This information should be substituted for the RIDEM 300 mg/kg policy level in the document.

18. Section 5.3, Estimation of Exposure Doses/Scenario 3 (Future Shellfishing): Page 5-9, Paragraph 2.

"For this scenario, adult residents are assumed exposed to constituents in shellfish (mussels and clams) from near-shore and off-shore locations near Site 01 through ingestion."

This scenario has not considered ingestion of shell fish by children. Ingestion of shell fish is not limited to adults. In addition, children are more sensitive to contaminants in shell fish than adults. Therefore, this scenario must include exposure to children.

The Navy states that a separate exposure scenario for children is not warranted. The State reiterates it's concern that children are more sensitive than adults to certain contaminants. Therefore, the increased sensitivity of children must be considered in the exposure assessment.

20. Section 5.3, Estimation of Exposure Doses/Scenario 3 (Future Shellfishing): Page 5-9, Paragraph 2.

"The shellfish ingestion rates (1200 mg/d for mussels and 1200 mg/d for clams) are based on an estimate of seafood serving sizes (150,000 mg/meal) and Rhode Island survey data on the number of hard-shell clam (ie quahogs) meals eaten per year (2.9 meals/yr) provided by RIDEM (Narragansett Bay Project."

The quoted ingestion rates do not consider subsistent individuals. The

report must also consider subsistent individuals and utilize the appropriate ingestion rate (36.5 meals/year).

The Navy states that a separate exposure scenario for subsistent individuals is not warranted. The State requests that the report note that the shell fish consumption rate in the report is for average individuals and that the subsistence individual has a higher consumption rate (36.5 meals/year).